

THE GRAFTON TO BRISBANE NATIONAL RAILWAY LINK

STANDARD GAUGE RAILWAY LINK

Prior to federation in 1901, Colonial Governments had built their railway systems to differing gauges. This lack of uniformity countered to ideals of Federation, imposing barriers to interstate trade by necessitating change of trains at State borders. The Grafton to Brisbane coastal railway was the first interstate railway built to 'standard' gauge (4'8.5" or 1435mm). This railway pioneered cooperation between the States and the Commonwealth in a program of engineering work under the "Uniform Railway Gauge Council". It is of national significance.

The railway line was completed in 1930. Trains crossed the Clarence River in Grafton by ferry until the opening in July 1932 of the road-rail bascule bridge over the river. In Queensland, the railway line terminated at South Brisbane. Construction by Queensland Rail of the Merivale Bridge over the Brisbane River enabled the standard gauge railway line to be connected to Roma Street Station on 24 May 1936.

Standard gauge railway connection for all mainland Australia was achieved with the completion of the Alice Springs to Darwin Line in 2004.



First standard gauge train arriving at South Brisbane, 1930.



Up Brisbane Limited on Border Spiral above No. 1 Tunnel.

DESIGNED BY TALENT - BUILT BY MUSCLE

The Grafton to Brisbane Railway Link was designed and constructed in each State by their respective Railway Departments.

To NSW Government Railways, the mountainous railway route posed many construction challenges. Chief Engineer William Hutchinson was the talent behind the design team in New South Wales. He pioneered engineering solutions such as Cougal Spiral (sometimes called The Loop) and the Border Tunnel of 1150 metres under Richmond Gap. The wet rugged conditions and isolation made it difficult to use the large machinery available in 1920's. Consequently, this was the last big railway project in Australia undertaken by men living in camps under canvas, and with energy supplied by human and animal muscle.

The task was also arduous for Queensland Railways - under Chief Engineer R.E. Sexton - constructing the line through the mountainous terrain to the Queensland side of the Border Tunnel. Initially Queensland constructed the line with 3'6" gauge on standard gauge foundation. Final phase of the work was converting the line to standard gauge by shifting one rail, starting at the Border Tunnel and working back to South Brisbane. The ease of conversion and the ability of Queensland Railways to deliver - by rail - construc-

THE ACHIEVEMENT IS RECOGNISED

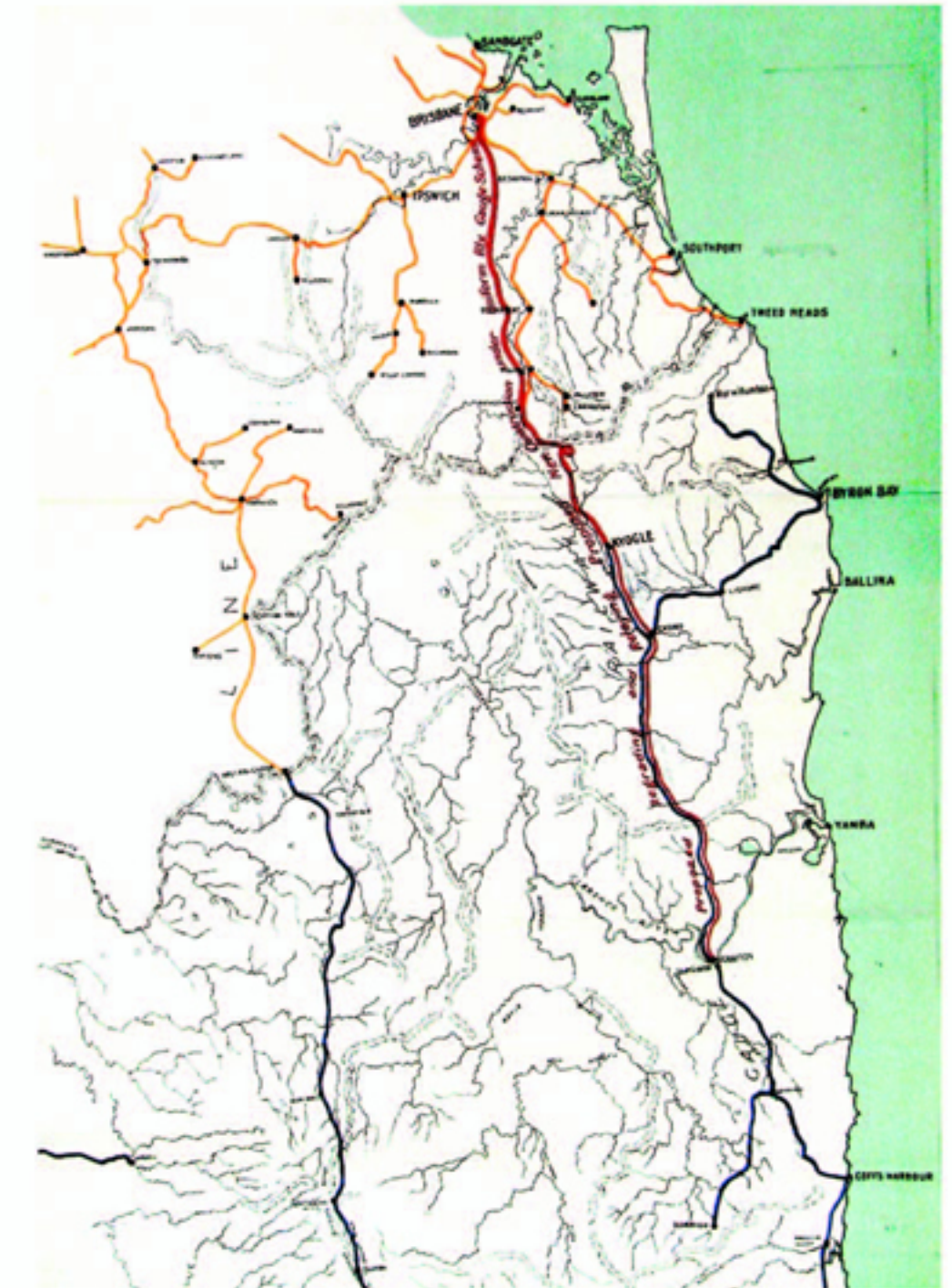
The Grafton to Brisbane National Railway Link was awarded National Engineering Heritage Landmark status by Engineering Heritage Australia, the heritage arm of Engineers Australia. The Award recognises that this work of engineering has a history which is of national significance to the people of Australia.



2011



ENGINEERS
AUSTRALIA
Queensland Division



Large Route Map ex NSW Board